



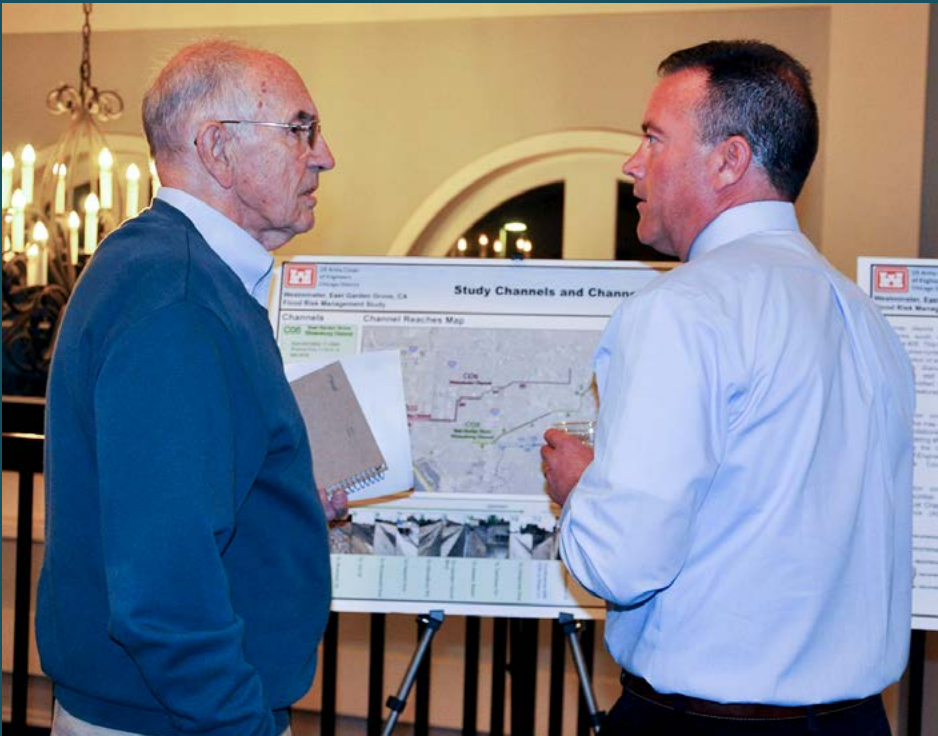
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Corps partners with Orange County on study to reduce flood risk

Joel Schmidt, hydraulic engineer with the U.S. Army Corps of Engineers Chicago District, right, speaks to a community member during a Nov. 8 public meeting about the Westminster/East Garden Grove Flood Risk Management Study in Huntington Beach, California.

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McCook Reservoir receives Mega- Project Award

The Chicagoland Underflow Plan – McCook Reservoir project received the “Outstanding Civil Engineering Achievement, Mega-Project Award” from the Illinois Section American Society of Civil Engineers

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Restoration efforts along Lake Michigan total 10 projects

District restoration efforts along Lake Michigan total 10 projects, 580 acres

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Over 225 residents attend Rio Guayanilla public meeting

The Chicago District hosted a public scoping meeting in Puerto Rico for the Rio Guayanilla feasibility study

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Equal Employment Opportunity

by Cheryl Stovall, EEO manager

There are times when work and life get frustrating. We are bombarded with ideas, news, and social media and on overload of information. With the availability of so much information we tend not to communicate in a proactive way to resolve conflicts. Instead we communicate via email, text or social apps, which can create misunderstandings, which cause feelings of harassment, bullying and alienation. Sometimes it can be taken as discrimination, when in actuality it is a difference in views based on our cultural and life experiences. Learning about different cultures, generational differences and gender biases helps us to broaden our perspectives and makes us better people both personally and professionally.

I have learned that communication is the key to building trust and bridging the cultural divide. Misunderstandings are bound to happen in any relationship, the key is to discuss the concerns openly and honestly. Although the truth can be a hard pill to swallow, in the end most find it to be a stress reliever when they understand the other person's point of view. Something as simple as saying, "I apologize if I offended you" goes a long way to help reset a relationship.

If someone happens to say something which is different or offensive and you think it is discriminatory, view the situation from the other person's point of view. Try to look for commonalities, instead of looking at differences when you are attempting to build or rebuild a relationship, a little knowledge and understanding can go a long way.

Bridging the Gap: Elaborate, effusive courtesy is a characteristic of Mexican communications. This formal courtesy can conceal true feelings. It is quite possible for Mexicans to politely say one thing and do the opposite.

Did you know: The official name of Mexico – Estados Unidos Mexicanos – translates to "The United States of Mexico." Referring to the United States of America as simply "The United States" can cause confusion. The polite Mexican term for a citizen of the United States of America is Norteamericano, although Mexico itself is technically part of North America. Canadians are called Canadienses to differentiate them from Norteamericanos. The term Americans is insufficient to designate citizens of the United States, since it can apply to anyone in North, Central or South America.

Safety

by Pete Flanagan, safety officer

Whether we like it or not, Old Man Winter is staring us right in the face. As grim as the prospect of 90 short, cold, and snowy days sounds, there are some things you can do to ensure a safe and healthy winter season.

Avoid packing on the extra pounds this winter by remaining active – both indoors and out. If you do find yourself parked in front of the TV, try to chow down on healthy snacks rather than on chips and dip,

ice cream and cake. As many of us know, it's much easier to put weight on than it is to take it off. While we're on the topic of health, it may be a good idea to ask your physician whether you're healthy enough to take on strenuous winter activities such as shoveling snow.

Safety-prepping your house for winter is much easier in October than it is in December. It's always a good idea to get your home's heating plant, flues, and chimneys

Hispanic Heritage Month



Sept. 18 kicked off Hispanic Heritage Month (Sept. 15 to Oct. 15) with a discussion on Puerto Rico's past, present and future by Dr. Carmelo Esterrich, associate professor of Spanish, Humanities, and Cultural Studies at Columbia College, Chicago. After his talk, Deputy Commander Lt. Col. Daniel Hayden presented him with a certificate of appreciation.

professionally evaluated and serviced before the heating season begins. Autumn is also a great time to test smoke and carbon monoxide detectors and replace expired or inoperable units.

Winter driving can be treacherous so don't forget to take your vehicle in for service as well. Your wipers, tires, brakes, exhaust, and cooling system are all things that you don't want to go bad in the middle of a blizzard.

Remember, taking a few common-sense precautions this fall could avoid rough sledding once the snow begins to fly.



Commander's Column

Hello Chicago Team! Wow! What a great start to 2019. I hope that everyone is making it through the dog days of winter. I'm sure that everyone has an interesting story from the brutal cold that we have endured. It is a good feeling, however, that the days are getting a little longer and we can see spring on the horizon!

The big news that I want to share is that the district was named a World Class Organization as a result of our Federal Employee Viewpoint Survey! This survey helps us to understand if we are doing everything possible to Take Care of People and to ensure we are maximizing everyone's individual potential. It is positive to see results that indicate our people believe they are doing important work; that we treat people with dignity and respect; and that we do everything possible to lead effectively.

Our challenge now is maintaining this level of performance for the long term. We have to continue to Take Care of our People to ensure that we remain a World Class Organization. Only through this approach will we be able to deliver our growing and complex program for our region and our nation. We

will Build Strong by Taking Care of Our People!

To set the right culture, I believe that we must bring new members of our team on in a welcoming and effective way. There is almost nothing more important than making the right first impression. This is why we are spending so much time training our supervisors on sponsorship, in-processing, on-boarding, and development. We want each new employee to have the tools necessary to hit the ground running. This starts with their work space - a work space that is ready to rock and roll!

As most of you know, we are hiring aggressively this year, and I am really proud of all our new employees and the diversity they represent. Diversity is one of the reasons that our district is a World Class Organization. We embrace and depend on diversity across our ranks. We depend on diversity of talent; diversity of background; diversity of thought; diversity of goals; and diversity of beliefs. Bringing this diversity together in a productive way makes us stronger than ever and allows us to serve our region effectively.

I had the opportunity to meet and recruit a lot of future talent at a job fair at Northwestern University in the fall and recently at the Black Engineer of the Year Award in Washington D.C. These young professionals displayed an inspiring level of passion for serving their community, environment and nation. They all represented incredibly diverse backgrounds, but they each had a unifying purpose to want to serve. Our mission, the mission of the USACE, really resonated with many of them. It

is a powerful thing when you can unify such a diverse group of people around a common mission.

I explained to every young professional that I met that there are two things I am most proud of about the United States Army Corps of Engineers and the Chicago District. First, the opportunities are endless. No other organization like us offers such a diverse set of opportunities. Second, we get to do really fascinating things that really matter to people and our environment. I promised them that if their heart was intent on serving, they would be fulfilled in the Army Corps. We are World Class because we get to do World Class work.

2019 represents incredible opportunities for us to continue to deliver a World Class program across our nation. Our teams are providing incredible support to work in California, Texas, and Puerto Rico on challenging flood risk management projects that epitomize our district's core strength. At home, we are leading the way on innovative approaches to completing projects, continuing to build our interagency support program, solving complex navigation and invasive species challenges, and delivering flood reduction and ecosystem restoration services across our region. What we do matters.

I am incredibly proud of the work each of you do for our team, for our region, and for our nation. I love the work and working with each of you. Please come by to see me if you have any concerns or ideas for our future. I look forward to a great year!

Building Strong and Taking Care of People!!

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Col. Aaron Reisinger, commander of the Chicago District, speaks to community members during a public meeting about the Westminster/East Garden Grove Flood Risk Management Study, as Col. Aaron Barta, the Corps' Los Angeles District commander, looks on, Nov. 7 in Westminster, California. (Photo Credit: Dena O'Dell)

Corps partners with Orange County on study to reduce flood risk, receive public input

by Dena O'Dell, U.S. Army Corps of Engineers Los Angeles District

WESTMINSTER, California (Nov. 21, 2018) – Close to a half million people within the Westminster watershed could be affected by flood risk.

That is the number one reason the U.S. Army Corps of Engineers Chicago and Los Angeles districts, in partnership with Orange County Public Works, are collaborating on the Westminster/East Garden Grove Flood Risk Management Study – a proposed project they hope will reduce that risk.

The Corps released its findings about the study in a Draft Integrated Feasibility Report and Environmental Impact Statement/Environmental Impact Report in October. A public comment period in regard to the reports is open through Dec. 3, 2018.

More than 100 community members attended two public meetings – one Nov. 7 in Westminster and the other Nov. 8 in Huntington Beach – to ask questions and get information about the proposed project.

The purpose of the study is to evaluate flood risk in the highly urbanized Westminster watershed in western

Orange County, which is about 87 square miles and lies on a flat coastal plain. Cities in the watershed include Anaheim, Santa Ana, Stanton, Cypress, Garden Grove, Westminster, Fountain Valley, Los Alamitos, Seal Beach, and Huntington Beach.

“First and foremost, this is a really big deal,” said Col. Aaron Reisinger, the Corps’ Chicago District commander, during the Nov. 7 meeting in Westminster. “We know there’s over 400,000 people and 40,000-plus structures within the Westminster watershed that would be directly impacted by flood risk, so that’s what our objective is ... to come in and help reduce flood risk.”

Features of the proposed project include modifying about 25 miles of drainage channels in the watershed to improve flow efficiency and capacity; widening an existing bottleneck at Warner Avenue and Huntington Harbour; replacing the tide gates on the East Garden Grove/Wintersburg Channel; and constructing a floodwall along a portion of the Pacific Coast Highway at Outer Bolsa Bay.

Reisinger highlighted the partnership needed to get the project into fruition, not just with the Corps, Orange County Public Works and its stakeholders, but most importantly, with community members living in the region.

“It’s a real honor to be with you tonight, to hear your concerns, to make sure we’re not missing anything,” he said. “Now is the time (for us) to hear your voice.”

Col. Aaron Barta, Los Angeles District commander, also emphasized the importance of partnerships and advocating on the community’s behalf.

“This is a very important project, that we do a study and advocate (for you) on why we should invest in it ... to protect life and property,” Barta said. “Our job is to help serve you.”

During both meetings, community members asked questions about the project, including the length of time it would take from start to completion; changes in traffic flows; if flood designations would be changed to reduce flood insurance premiums for homeowners; what is the federal

funding for the project; Orange County’s share of the cost of the project; noise and vibrations during construction; environmental impacts to the Bolsa Bay and Bolsa Chica Basin and how those impacts would be mitigated; and how to look into ways of capturing storm water runoff, among other topics.

According to Shane Silsby, Public Works director for Orange County, the county’s goal is two-fold: to protect life and property, and to try to reduce flood insurance premiums for homeowners.

“To achieve those two primary things, we need help from our partners in the federal government because this project – \$1.5 billion – we cannot do that alone

as a flood control district. It would take decades,” Silsby said.

After the comment period closes (Dec. 3, 2018), representatives with the Corps will address and evaluate all comments to see whether they have changed the agency’s basic conclusions about the National Economic Development and Locally Preferred plans, said Mike Padilla, project manager for the study with the Corps’ Chicago District.

The team will discuss results of the public and technical reviewers’ comments with the Corps’ Headquarters in Washington, D.C., during an Agency Decision Milestone in January 2019 to decide whether to proceed with the

plans, Padilla said. The final report will be submitted to the Corps’ Headquarters in fall 2019, and Corps’ representatives hope to have the report to Congress by spring 2020. If funds are appropriated by Congress, construction of the project could begin in 2022.

The draft feasibility report was completed in October in collaboration with Orange County Public Works and can be found at <https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/Westminster-East-Garden-Grove/>.



Metropolitan Water Reclamation District Commissioner Debra Shore; Mary Ann Levar, U.S. Rep. Mike Quigley’s office; Col. Aaron Reisinger, commander of the Chicago District; John Quail, Friends of the Chicago River; Kathy Breitenbach, Chicago Park District; MWRD President Mariyana Spyropoulos, and MWRD Commissioner Frank Avila pose during the beginning demolition of the 108-year-old dam (at right), July 31.



North Branch dam demolition marks start of NBCR improvements

July 31, the U.S. Army Corps of Engineers Chicago District began demolition of the four-foot high concrete North Branch dam at the convergence of the North Branch of the Chicago River and North Shore Channel in River Park. The century-old dam will be replaced by riffle step pools to slow the flow of water and allow fish to swim upstream. This work is a critical component to coordinated efforts throughout Chicago and beyond to improve the water and

habitat quality, aesthetics and access of the Chicago River.

Officials with the Metropolitan Water Reclamation District of Greater Chicago, U.S. Army Corps of Engineers Chicago District, Chicago Park District, Friends of the Chicago River, Illinois Department of Natural Resources, and City of Chicago marked the first phase of improvements to the confluence of the North Branch of the Chicago River and North Shore Channel surrounding

River Park.

In support of the Corps’ River Riparian and Habitat Project, work in and along the waterways will be broken down into multiple phases, starting with the restoration of approximately one acre of stream bed. The 108-year-old North Branch Dam and other concrete within the channel will be removed and riffles, step pools, cobbles, gravels and sands will be installed.



Bill Rochford, chief of the Chicago District's geotechnical and survey section, accepts the award alongside his Corps and Metropolitan Water Reclamation District team Oct. 11, 2018. (Photo courtesy of Illinois Section American Society of Civil Engineers)

McCook Reservoir receives Mega-Project Award

The Chicagoland Underflow Plan (CUP) – McCook Reservoir project received the “Outstanding Civil Engineering Achievement, Mega-Project Award” from the Illinois Section American Society of Civil Engineers at its annual awards dinner at the Crystal Gardens at Navy Pier Oct. 11, 2018.

The project was designed and constructed by the U.S. Army Corps of Engineers Chicago District, in partnership with the Metropolitan Water Reclamation District of Greater Chicago. The purpose of the project is to reduce flooding in the Chicagoland area by capturing combined sewer overflow (CSO) water from intense rain events that would otherwise backup in basements and streets and directly discharge into local waterways and backflow into Lake Michigan. The project benefits over

3 million people in Chicago and 36 surrounding communities.

The reservoir is located southwest of Chicago adjacent to I-55 (Stevenson Expressway) between the Chicago Sanitary and Ship Canal and the Des Plaines River east of LaGrange Road. The reservoir is being constructed in two stages, with stage one consisting of approximately 3.5 billion gallons (operational as of Jan. 1, 2018), and stage two (approximately 6.5 billion gallons) expected to be online in 2029. The overall project design capacity of 10 billion gallons will make it the largest reservoir for CSO storage in the world.

The reservoir was constructed by excavating through approximately 50 feet of overburden and 250 feet into rock. CSO water is directed to the reservoir by connecting to the 33-foot inside

diameter deep tunnel system through a gate structure consisting of six 15x30-foot wheel gates. The reservoir is drained through an 11.5-foot diameter tunnel through the underground distribution chamber having six 60-inch diameter cone valves and four 5 by 6-foot slide gates.

As if to showcase the monumental achievement of the team, after stage one becoming operational on Jan. 1, 2018, the reservoir was put to the test when the storm event in February 2018 filled the reservoir to capacity. The reservoir performed as designed and prevented an estimated \$30 million in flood damages in its debut performance. Since then, the stage one reservoir has filled completely two additional times and more than 50 percent full during three other events in the very wet spring of 2018.

The reservoir has been heavily utilized very quickly and has been performing exceptionally well, providing significant flood reduction benefits to the region.

This project has extended the state-of-the-art for construction in many different areas of civil works including: cutoff wall construction (over 60 feet deep and keyed into bedrock), foundation grouting (over 300 feet deep), rock wall stabilization of walls up to 250 feet in height, rock tunneling and underground construction, and fabrication and installation of large mechanical gates and valves. To accomplish this major engineering achievement required the

efforts of many Corps staff, architecture and engineering firms, construction firms, fabricators and suppliers, and is a great credit to the engineering and construction industry.

“The McCook Reservoir project is an exceptional project that reduces the flood risk to over 3 million people in the Chicagoland area,” Bill Rochford, chief, Geotechnical and Survey Section, said. “This project was envisioned by the MWRD many decades ago and was implemented by the Corps in partnership with the MWRD through the efforts of many individuals of both our organizations and the many design

and construction firms needed to bring the project together. It required many innovative and creative solutions to significant challenges in order to safely construct a reservoir 300 feet below ground between two waterways and next to an interstate highway. The benefits of this project has been demonstrated almost immediately since becoming operational this past January, having been filled four times so far this year. It has been a project that has advanced the state of the art in numerous areas, and has been a great pleasure and professionally rewarding to be a part of the team to making this project a success.”



Pictured from left: Col. Aaron Reisinger, commander of the Chicago District; Suzanne Hart, president of the Forest Preserve District of Will County; Rep. Daniel Lipinski (IL-3); Lauren Staley-Ferry, commissioner of FPDWC; Annette Parker, vice president of FPDWC; and Ralph Schultz, chief operating officer, FPWC. (U.S. Army photo by Patrick Bruy)

Ceremony marks project starts for Prairie Bluff, Lockport Prairie nature preserves

A groundbreaking ceremony took place Aug. 6, 2018, for a U.S. Army Corps of Engineers 700-acre aquatic ecosystem restoration project at two Forest Preserve District of Will County sites - Prairie Bluff Preserve in Crest Hill, and Lockport Prairie Nature Preserve in Lockport Township.

The groundbreaking celebrates a multimillion-dollar project being cost-shared with the FPDWC that will remove invasive species and encourage native plant growth at both preserves. The work also will replenish Prairie Bluff's underground water system so it flows to Lockport Prairie, which consists of an

extremely rare patch of habitat.

For project information, go to <https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/Lockport-Prairie-Nature-Preserve/>



Northerly Island

Restoration efforts along Lake Michigan total 10 projects, 580 acres

by Gene Fleming, chief, Environmental Formulation and Analysis Section

The Chicago District currently has 32 ecosystem restoration projects recently completed or under construction within its footprint of six counties in Illinois and three in northwest Indiana. These projects have protected or restored over 4,100 acres of habitat, providing substantial benefits to wildlife and improving the quality of life through compatible recreation such as wildlife watching and hunting for the region's 9.4 million residents.

The district's restoration efforts along Lake Michigan include 10 projects, totaling 580 acres. These projects provide critical habitat for a whole host of creatures including resident and migratory birds. The migratory birds – which include falcons, hawks, owls, songbirds, waterfowl, terns and shorebirds – need to find food, shelter and protection from hazards along this portion of the globally-significant 9,000-plus mile north-south flyway. The Chicago Museum of Natural History has estimated that, on average, more than 5 million

neo-tropic migrant songbirds, a significant portion of the entire North American population, pass through Chicago twice a year using this flyway – an area that contributes greatly to the birds arriving at their ultimate destinations.

Fort Sheridan, Lake County, Illinois

The study area is located along the western shoreline of southern Lake Michigan east of Sheridan Road in the cities of Lake Forest and Highland Park, Illinois. It consists of eight main ravines, several small unnamed ravines, the ravines' watersheds, bluff along the coastline, the beach, and littoral zone of Lake Michigan. Construction started in the winter of 2016 and will be complete in the fall of 2023, which includes a monitoring period of three years after construction. Federal funding was provided by the U.S. Environmental Protection Agency managed Great Lakes Restoration Initiative (GLRI) appropriations. The GLRI is an EPA-managed federal program that

strategically targets the biggest threats to the Great Lakes ecosystem.

The nonfederal partners are the Lake County Forest Preserve, Openlands, the town of Fort Sheridan, and the city of Lake Forest.

This project will restore approximately 200 acres of lacustrine, beach, dune, bluff, plateau, and ravine habitat along the Lake Michigan shoreline, and provide significant littoral zone habitat for fishes within 25 miles. Restoration will include approximately 1.5 miles of protected shoreline which is host to thousands of migrating birds and five endangered and threatened plants: buffalo berry, seaside spurge, sea rocket, beach grass, and common juniper. The project will remove or modify excessive infrastructure and urban runoff from the ravines and beach to reduce erosion, improve the habitat for resident and migrating birds, stabilize the bluff and ravine communities, remove non-native and invasive species, and restore the lakeshore habitats.

63rd Street Dune and Beach, Chicago

The 63rd Street Dune and Beach project is part of the Lake Michigan coastal zone and is located in northeastern Illinois at 6300 South Lake Shore Drive in Chicago. Construction started in 2010 and was completed in December 2011, with a two-year period of establishment of the plants by the Chicago Park District, the nonfederal partner.

The 63rd Street Dune and Beach restoration site was a degraded lacustrine and coastal beach habitat. The lacustrine habitat includes three lenses of intermingled large and small cobblestone along the existing jetty as habitat for invertebrates, insects, and a variety of spawning fishes. Interspersed among the stone are randomly placed woody debris to increase the vertical habitat for fishes. Three coastal plant communities were restored, two along the current beach area and one landward of the beach. The two areas within the beach area were restored to a predominant community of marram and little bluestem grass dunes, while the landward-most site was restored to a coastal savanna habitat with the predominant species of oak, sand cherry and little bluestem.

The project has restored a portion of the Great Lakes coastal habitat while incorporating compatible educational opportunities. The 21-acre permanent restoration site now supports a diverse array of native plant and fish species, and migratory and resident birds. The restored habitats include 14 acres of dune and swale habitats along with seven acres of lacustrine cobblestone pockets and woody debris. This area is used during the migration seasons by waterfowl and several species of shorebirds, including the tricolored heron and the federally-endangered piping plover.

Rosewood Park, Highland Park, Illinois

The Rosewood Beach restoration area is located in northeast Illinois in Lake County. This restoration site is located on the shore of Lake Michigan, approximately 25 miles north of the

City of Chicago in Highland Park, Illinois. The project is in the design and implementation phase. Construction was initiated in spring 2014 and was completed in September 2018. The nonfederal partner is the Park District of Highland Park.

The restoration design consists of a series of naturalistic offshore protection/habitat islands and peninsulas forming a series of beach cells. Key features include unique naturalistic wave breaks to protect the shoreline from incoming waves, allow for natural shoreline sediment transport, and incorporate areas for emergent native plantings and coastal marshes on their shore-facing sides; ravine restoration to reduce sediment loading to Lake Michigan and to provide unique habitat; daylight ravine mouth with naturally vegetated riffles and pools to filter and aerate storm water; and barrier removal to improve fish access to the tributary stream.

This seven-acre project will restore the connectivity of the ravine mouth to its outlet, Lake Michigan. It includes the removal of the double box culvert and instream weirs, daylighting the channel and restoring the streambed with gravel/pebble/cobble, plus two cobble/boulder riffles to repair stream mouth hydraulics.

Restoration of the day-lighted channel will also include a light grading of the streambanks to return appropriate bank slopes and plantings of native riparian vegetation to promote bank stabilization. The bioengineered protective habitat islands will provide significant littoral zone habitat for fishes within a 25-mile radius and improve reproduction of several native fishes including but not limited to: emerald shiner, longnose sucker, shorthead redhorse, silver redhorse, trout-perch, smallmouth bass, rock bass, yellow perch, and walleye. Landward wetland and dune habitat restoration will provide habitat for shorebirds and insects.

Northerly Island, Chicago

Northerly Island is a 91-acre man-made peninsula on the shores of southern Lake Michigan in Chicago that was a part of

Daniel Burnham's 1909 Plan of Chicago to reclaim the lakefront for the public. The construction contract was awarded in September 2012 using a combination of GLRI, USACE, and nonfederal funding. The nonfederal partner is the Chicago Park District. Northerly Island was used for years by the general public including its paths and walkways, a beach at 12th Street, and home to the 1933-34 World's Fair. It became an airport, Meigs Field, in 1946 until 2003 when it was decided to convert it back into green space for the public and expand the museum campus. Northerly Island is located adjacent to or near the Adler Planetarium, the Shedd Aquarium, and the Field Museum of Natural History. The ecosystem restoration project is located in the southern 40 acres of the peninsula.

Until recently, the southern portion of Northerly Island was used for passive recreation. A paved bicycle path meandered throughout the 40 acres and was surrounded by a prairie-like field that provided limited habitat for many species of migratory birds. The field consisted of a combination of invasive species and random native plants. Additionally, much of the field was mowed and therefore had little ecologic value. Aquatic resources in the project area were limited to the surrounding Lake Michigan.

The perimeter of the project area is contained by revetment walls that provide limited ecosystem habitat with very few macrophytes and habitat niches for aquatic organisms to thrive. The project has created 40 acres of significant coastal habitat.

The 40 acres of coastal habitat in southern Lake Michigan includes 18 acres of oak savanna, 10 acres of mesic prairie, 3.3 acres of wet prairie, 2.2 acres of emergent marsh, 4.1 acres of pond, and 1.7 acres of lacustrine littoral habitat. The project will greatly benefit habitat for a variety of migratory and resident bird species, fish, amphibians, reptiles, insects, and mammals. Specifically, the state-threatened banded killifish (*Fundulus diaphanous*) and mudpuppy (*Necturus maculosus*) may benefit from this project.

Portage Lakefront Park, Porter County, Indiana

This project involves restoring approximately 68 acres of habitat including coastal dunes, oak savanna, oak woodland, and naturalizing streambank. The Portage Park study area is part of the Lake Michigan coastline, located in Porter County in northwestern Indiana.

The Portage Park feasibility study was approved in August 2012, and the project partnership agreement was signed in May 2013. A five-year construction contract was awarded in September 2014, with a spring 2015 construction start.

Jackson Park, Chicago

Jackson Park is located along the western shore of Lake Michigan. Construction started in 2014 and will be completed in September 2019, followed by a monitoring and establishment period of three years (until 2022). Federal funding was provided by GLRI appropriations. The nonfederal partner is the Chicago Park District.

The park resides between 56th Street to the north and 67th Street to the outh. The eastern boundary is Lake Shore Drive and Lake Michigan, and to the west Stony Island Avenue. The study area consists of various natural area parcels of land that total about 155 acres. The project is located just south of the Museum of Science and Industry, adjacent to the future Obama Library, and will surround Yoko Ono’s first North America permanent public art installation, “Sky Landing.”

The project will restore 155 acres of habitat including approximately 18 acres of pond, 20 acres of fringe marsh, two acres of island, two acres of sedge meadow, and 113 acres of oak savanna and woodlands. Restoration measures include the removal of invasive plants and fish species, geomorphic contouring, creation of mud puppy habitat, creation of vernal pools, restocking with native fish species, and installing native plant species in the various habitat types. The preservation and rehabilitation of the character of the cultural landscape, as designed by Frederick Olmsted in 1890,

is a significant component of this project.

The restored habitat adjacent to the southern shoreline of Lake Michigan will greatly benefit a variety of resident and migratory bird species including an estimated 5 million neo-tropic migrant songbirds in addition to water birds (herons, ducks, mergansers, grebes), amphibians, macroinvertebrates, fish, reptiles, insects, and mammals. Specifically, the state threatened mudpuppy (*Necturus maculosus*) should benefit from this project.

Fort Sheridan, Lake County, Illinois

The Fort Sheridan Coastal Habitat Restoration Project (aka Jane’s Ravine), authorized by the Estuary Restoration Act of 2000, constructed 14.5 acres of upland swale. The swale diverts highly-erosive storm water away from Jane’s Ravine protecting this ecologically-significant habitat. The swale, including portions of Jane’s Ravine, are positively impacting nearly 30 acres of habitat. Additionally, this project is adjacent to and compliments the restoration of over 200 acres of habitat in the Lake County Forest Preserve District. Construction was completed in 2010. The nonfederal partner was the Lake County Forest Preserve District.

This project included the restoration of nearly 30 acres of habitat. The Corps portion of the work focused on the rerouting of storm water drainage away from Jane’s Ravine and across an upland area within the basin. The project included the placement of an erosion control mat and fabric, native plant seeding of excavated areas, placement of grade control stone checks, and stabilization of the outflow area.

Ecosystem benefits:

- Jane’s Ravine contains some of the rarest plants in Illinois, including a rare community of over 240 species (nearly 200 native) of relict northern-range vegetation (e.g., paper birches and spreading juniper).
- Jane’s Ravine is adjacent to, and compliments the restoration by others, of over 200 acres of habitat in the Lake County Forest Preserve District.

- The ornithologists at Chicago’s Field Museum of Natural History estimate that, on average, more than 5 million migrating songbirds pass up and down the western shoreline of Lake Michigan in metropolitan Chicago. This is a noticeable fraction of the entire population of songbirds that migrate through North America.

- This restoration project will provide these songbirds and all migratory birds a stop-over site to rest and feed on the right kind of high calorie, high protein seeds, fruits and insects for their long distance trips on this globally significant north-south flyway.

- Jane’s Ravine and neighboring ravines offer excellent habitat for 51 species of resident birds.

- Connects to a 1.8 mile multi-use recreational trail from the North Shore Bike Trail on the west to Lake Michigan on the east including the Fort Sheridan Cemetery and adjacent residential areas.

Lake County Ravine 8, Highland Park, Illinois

The Ravine 8 restoration site is located in northeast Illinois in Lake County on the western shoreline of Lake Michigan, approximately 25 miles north of Chicago in Highland Park, Illinois. Construction started in the winter of 2016 and will be completed in September 2020. Federal funding was provided by GLRI appropriations. The nonfederal partner is the City of Highland Park.

Ravine 8 is part of the ravine complex in northeastern Illinois on Lake Michigan’s southwestern shore. Precipitation and headwater streams carved out their channels through the Highland Park moraine thousands of years ago, creating the ravines that are present today. Urbanization and development around the ravine has forced significantly larger amounts of water through Ravine 8 during storm and run-off events. These events cause erosion which lead to a loss of native vegetation providing an opportunity for invasive plant species to colonize the disturbed areas. This restoration project seeks to stabilize the natural hydrology



Jeorse Park Beach, Indiana

of Ravine 8, restore tributary fish habitat, and re-establish native plant communities to enhance near shore wildlife habitat.

Restoring and protecting this rare and valuable four-acre ravine habitat will contribute to the health and sustainability of the Lake Michigan shoreline environment. The project will seek to restore and stabilize the ravine hydrology to improve habitat for native vegetation, improve access to ravine habitat for native littoral fish species, and increase riparian habitat for locally rare species. Although no federal-listed species have been recorded at the project site, project features would be beneficial to federally endangered and/or threatened species that could colonize the area in the future.

Jeorse Park Beach, East Chicago, Indiana

Jeorse Park Beach is located along the Lake Michigan shoreline southeast of Indiana Harbor and Shipping Canal in Lake County, Indiana. It is owned and operated by the City of East Chicago, Indiana. The construction contract was awarded in September 2016 and construction should be complete by September 2021, followed by three years of post-construction monitoring. The project was funded with GLRI appropriations. The nonfederal partner is the City of East Chicago.

The project is adjacent to the Amtrak railroad lines with approximately 14.8 acres of beach and foredune habitat on the lakeside. The beach offers nearly 4,500 feet of shoreline for potential

aquatic habitat restoration and over 25 acres of lake bottom. The beach is within the EPA’s designated Grand Calumet River Area of Concern.

This project will address the restoration of habitat types located at or near Jeorse Park including near shore fisheries, beach and foredune. By restoring near shore hydraulics and increasing native floristic quality onshore, this project will provide essential habitat for fishes, migratory birds, reptiles and amphibians.

The restoration project at Jeorse Park Beach will greatly increase the quality of the submerged aquatic habitat ideal for spawning and foraging of native fishes, amphibians and macroinvertebrates. The restoration will increase dune acreage and stability, decrease populations of nuisance bird species and return a more natural flow regime to the near shore current pattern along the beach. It is expected that this project will contribute significantly to removing select beneficial use impairments within the Grand Calumet River Area of Concern.

Lake County Ravine 10, Highland Park, Illinois

The study is in the very early stages. However it has been determined that there is a federal interest in restoring the site assuming a cost effective alternative can be formulated and a cost sharing nonfederal sponsor is available. The study area is located in Highland Park, Cook County, Illinois, along the Lake Michigan coast. The study area core is Moraine Park, which specifically resides

west of Lake Michigan, east of Sheridan Road, south of Riparian Road and north of Maple Road.

The study area also includes the stream channel upstream to Port Clinton Park and the riparian slopes within Port Clinton Park.

Initial investigations have been undertaken and many problems and opportunities have been identified including: restore stream connectivity and habitat diversity; reconnect the ravine to Lake Michigan by modifying man-made structures at mouth; remove all unnecessary riprap substrates from stream channel (4,860 feet), banks and floodplain; restore stream bottom with appropriate habitat; allow woody debris to naturally enter the stream; consider the placement of riffle structures; increase foraging and nesting habitat for state-threatened Mudpuppy; reduce and/or eradicate invasive plant species; remove and/or herbicide non-native and invasive trees, shrubs, forbs and grasses; conduct controlled burns; increase floristic quality, richness and abundance of native plants; plant appropriate plant communities of dune, bluff, and ravine; and increase habitat for migratory and residential birds.

As the Ravine 10 study progresses, a range of alternatives will be formulated. Projects that are in the public interest, cost effective, and compliant with all appropriate laws, executive orders and regulations, will be further evaluated.



A public comment is made during USACE's public scoping meeting in Rio Guayanilla, Nov. 28, 2018.

Over 225 residents attend Rio Guayanilla public meeting

by Vanessa Villarreal, Chicago District Public Affairs Office

More than 225 people attended a public scoping meeting in Puerto Rico Nov. 28, 2018, for the Corps' Rio Guayanilla feasibility study. The meeting, hosted by the USACE Chicago District, was held in collaboration with the USACE Jacksonville District, the study's nonfederal sponsor; the Puerto Rico Department of Natural and Environmental Resources, and the Town of Guayanilla.

The study will investigate overbank flooding and erosion-threatening infrastructure along Rio Guayanilla, a watershed that measures 37 square miles. The feasibility study will focus on prioritizing high risk areas, and developing a range of possible structural and non-structural alternatives to reduce flood risk.

"The deviation of the Guayanilla River through this channeling project will help with the infrastructure of the city," Guayanilla Mayor Nelson Torres Yordán said. "It will also help our local businesses, schools and, most



From left, Jorge Taus, project manager from the Corps' Jacksonville District San Juan project office, works alongside Frank Veraldi, lead planner, during a Nov. 29 site visit.

important, it will guarantee the safety of our residents every time it rains or a hurricane hits the island."

The Corps is preparing a combined Feasibility Study Report and National Environmental Policy Act (NEPA) document to evaluate the potential

effects of alternatives to manage risks associated with flooding at Guayanilla, located 89 miles south of San Juan and within the active floodplain of Rio Guayanilla. It has experienced flood damages and socio-economic impacts as a result, with the latest effects stemming

from Hurricane Maria in 2017. Measures and alternatives that could be evaluated to reduce flood risk and erosion include levees or floodwalls, diversion channels, channel modifications, flow control structures, flood proofing, structure elevations, and buyouts.

"I give you my personal commitment that we're committed to do everything in our power to generate a project here that reduces flood risks to your community and to each and every single one of you," Col. Aaron Reisinger, Chicago District commander, said at the public meeting. "I really appreciate the opportunity to be here. I'm really looking forward to your comments."

As part of the NEPA scoping process, the Chicago District accepted comments from Nov. 1 to Dec. 15. During that time, the district received about 30 public and written comments with topics ranging from flooding, human environment, wetlands, rare and unique habitat, threatened and endangered species, and cultural and social resources and impacts.

According to Yordán, when the river overflows all of the municipality's essential services are interrupted, and its local Emergency Management and Police departments are not able to respond to emergencies effectively.

"This project will definitely bring peace of mind," he said. "But it will also bring a boost to our economy because when the river is no longer a threat, developers and investors will be interested in establishing their business in our city."

The Corps' Rio Guayanilla project delivery team (PDT) was on hand to answer questions at the public meeting, and spent hours out in the field that same week gathering data that will be used to inform the modeling and alternative assessment work. The team also met with a handful of stakeholders that included the Puerto Rico State Historic Preservation Office, Guayanilla Police Department, Federal Emergency Management Agency, and the U.S. Fish and Wildlife Service.

Jeff Zuercher, project manager, sees the project from start to finish, and makes sure his PDT has anything and



Yuki Galisanao, geotechnical engineer (foreground), looks at the project area in Rio Guayanilla, Nov. 29, with other PDT members.



The team stops for a photo in Puerto Rico, Nov. 2018.

everything it needs – from funding to de-conflicting schedules. He was able to go to Puerto Rico in September for an initial visit.

“It was great to be able to meet with the mayor and his team to learn about the situation and the impacts that it is having on the community,” he said. “We were able to see firsthand the amount of destruction caused by the devastating floods and the impacts to the community. It solidified in my mind the importance of this project and the good that we could do for the community if we are able to come up with a viable solution.”

Frank Veraldi, lead planner, said his main focus is environmental assessment and compliance. This includes assessing effects of potential project features on wetlands, habitat, natural resources, and endangered species; and coordinating with regulatory agencies and the public.

“I will also be providing assistance to the flood risk management lead planner in compiling and writing the main report, developing measures and alternatives to reduce flood risks, and designing and justifying mitigation if required,” he said.

David Druzicki, cost engineer, develops the cost estimates for the various alternative plans. He said site visits are always important in determining costs.

“I was able to get a lot of good information from Jorge Tous (Jacksonville District project manager based in Puerto Rico) in regarding current market conditions, labor and material availability, potential borrow sites, site conditions, access, along with other ongoing projects in Puerto Rico,” he said. “I will be using all of this information to prepare the estimates.”

Kristine Meyer, hydraulic engineer, investigated the river and its watershed.

“I observed, since my visit in September, that there had been significant sediment deposits in various locations along the river,” she said. “This was good to see in person as others from Puerto Rico told me this could be a challenge with the proposed design.”

Meredith Moreno, lead archaeologist in Jacksonville District’s Environmental Branch, is the cultural resources PDT member for the project.

“I will be managing the cultural resources survey of the project area, coordinating with the Puerto Rico State Historic Preservation Office, and writing the cultural resources portion of the environmental assessment,” she said.

Yuki Galisanao, geotechnical engineer, said she spent her field time looking at the subsurface information in the area, plus determining current levee design.

“In Puerto Rico, it was mostly to become familiar with the project area, assessing potential issues with the location of the levees and boring locations, looking at similar projects to get a better understanding of how they construct levees there, and data collection,” she said.

Jorge Tous, Jacksonville District project manager based in Puerto Rico, has been involved in every site visit and meeting for the Rio Guayanilla project since day one. He began working for the Corps in 1982 with the New Orleans District. Then, in 1987, he moved to the Jacksonville District office in Puerto Rico.

“I have been working with Rio Guayanilla flooding problems for over 30 years,” he said. “I put together the Corps’ 1990 Reconnaissance Report. I also did most of the previous data and research for other reports, too.”

He said there have been more than 10 floods in the past 25 years. Over 1,000 homes, businesses, industries, and utility services have been affected. The Department of Natural Resources completed some detailed engineering analysis studies, along with an environmental impact statement at the end of the 1980s. In the May 1990 Reconnaissance Report, five alternatives were proposed that included dikes, improvements to canals, diversion of canals, dams, improvement and replacement of bridges.

Tous said he’s also formed partnerships with several agencies and many municipalities in Puerto Rico over the years.

“Partnerships are important to create the necessary trust and engagement from the locals,” he said.

The current feasibility phase includes the scope and formulation of the alternatives. Here, there is an inventory taken of what the existing conditions are, and a forecast of future conditions.

“That is why information from the public is very important,” Zuercher said. “We’re seeking data regarding any previous preliminary costs and benefits, plus flood damages and impacts to the community.”

The next phase is analysis and evaluation of the alternatives. In this, the design, cost, and environmental impact are measured. These potential alternatives are evaluated and compared to identify a tentatively-selected plan. Then a Project Report is published so that the public, other agencies, and internal reviewers can give their comments in that regard, on those alternative plans. The target date for that phase is Fall 2019.

Sue Davis, chief of planning for the Chicago District, said her role is to ensure that we complete a sound and defensible study.

“The people in Puerto Rico are energized and committed to taking advantage of the opportunity that the supplemental bill has provided,” she said. “I can’t remember a time when so many agencies participated in public meetings. We’ve had a great response from the agencies, and the community has been so proactive it is making our work easier.”

“This project will revitalize the city of Guayanilla, upturn the economic

activities, and stabilize the social ones,” Yordán said. “Meaning that our people will not have to migrate to other cities so that they can perform economic and social activities here, and that we will be able to welcome residents of the nearby cities. As the Mayor of Guayanilla and as a Puerto Rican, I hope this project can also help us burgeon all our in-house projects in order to contribute with the economic growth of Guayanilla and Puerto Rico.”

“I am so excited for the opportunity to work with our great team here in support of the Corps-wide enterprise,” Davis said. “The people in Guayanilla have been through a lot of heartbreak, but they continue to persevere. They are committed to finding a solution to the flooding that has been plaguing them for decades.”

Zuercher added that the PDT knows that a recommended project and construction of a viable alternative could be a game changer for Guayanilla.

“We saw firsthand how other USACE projects in Puerto Rico were able to spur development and economic benefits for entire communities,” Zuercher said. “The team wants to produce a high-quality product as quickly as possible to give Guayanilla a chance to experience a renaissance of their own.”



The Corps holds a charrette with Rio Guayanilla Mayor Nelson Torres Yordán and other stakeholders, Nov. 28, 2018.



District Commander Col. Aaron Reisinger speaks to Guayanilla Mayor Nelson Torres Yordan during a sponsor meeting, Nov. 27.



SCENE ABOUT TOWN

DuPage River project public meeting



A public meeting was held Aug. 15 in Wheaton, Illinois, to provide the public with information about the DuPage River Draft Detailed Project Report and Integrated Environmental Assessment, and seek input from members of the community and other stakeholders on the recommended plan. In partnership with DuPage County Stormwater Management, Will County Executive Office, and Illinois Department of Natural Resources, the Chicago District conducted a feasibility study to address flood risk in DuPage and Will counties. On July 31, 2018, the Detailed Project Report and Integrated Environmental Assessment, documenting the study process and recommendations, was released for public review and comment through Aug. 30.

Horner Park site tour



The Chicago District, along with the Chicago Park District, conducted a site tour of the Horner Park Aquatic Ecosystem Restoration Project for members of the local community, July 14.

Jason Zylka, lead ecologist on the project for the Corps (at left of photo), engaged community members by explaining the restoration process and demonstrating the results of the project.

Silver carp monitoring



Sept. 27, Chicago District biologists surgically implanted ultrasonic acoustic transmitters into Silver carp within the Dresden Island Pool of the Illinois Waterway. This allows the fish to be released back into the river and their movements tracked by a series of receivers strategically placed around control points. Resource managers use this information to improve harvest and countermeasures to the invasion front of big headed carps.

Pictured here is Matthew Shanks, fish biologist and planner, and deputy chief of the Planning Branch.

Country Club Hills ribbon cutting



Nov. 13, the U.S. Army Corps of Engineers, Rep. Robin Kelly (IL-2), and Country Club Hills Mayor James Ford held a ribbon cutting ceremony to mark the end of a water main replacement project in Country Club Hills, Illinois. The project upgraded approximately 2,900 linear feet of the water main system in the City of Country Club Hills. The nonfederal sponsor was the City of Country Club Hills. Field construction work started in June 2018 and was completed on Nov. 3, 2018.

This project is part of the Environmental Infrastructure Section 219 that authorizes the Corps to assist local governments in planning, designing, and constructing water-related projects. This project was cost-shared at 75 percent federal and 25 percent nonfederal.

Horner Park ribbon cutting



Sept. 15, the Chicago District, Chicago Park District, Friends of the Chicago River, and 33rd Ward Ald. Deb Mell officially opened the natural habitat area in Horner Park.

The Corps' Horner Park project, along the North Branch of the Chicago River, is being done in partnership with the Chicago Park District. For more information, go to <https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/Horner-Park/>

Alabama A&M University career fair



The Project Management and Equal Employment Opportunity offices participated in a career fair at Alabama A&M University, Oct. 10 - 12.

Pictured here (at right), Natalie Mills, civil engineer and project manager, speaks to students about the USACE mission and her career with the Corps.



SCENE ABOUT TOWN

Society of Asian Scientists & Engineers National Conference, STEM career fair



On Oct. 6, Chicago District engineers and U.S. Army Engineer Research and Development Center staff from Vicksburg, Mississippi, participated in the Society of Asian Scientists & Engineers' National Conference and STEM Career Fair in Schaumburg, Illinois - "the largest conference and career fair for Asian Americans in the United States."

Pictured here, Speler Montgomery, from the Corps' Engineer Research and Development Center, and Justin Griffeth, geotechnical engineer, speak to attendees.



Kelly Granberg, environmental engineer, speaks to a participant about the Corps' mission and structure.

Holiday celebration



The district held its holiday party at Wildfire Chicago, Dec. 12.

Lenart Elementary School STEM event



On Dec. 6, Civil Engineers Natalie Mills (top photo) and Laura Vanden Berg (at left) participated in Lenart Elementary School's annual STEM night on the city's South Side.

Approximately 50 students from grades 1 to 5 rotated through six different STEM activities. Mills and Vanden Berg built structures and bridges with the students, and spoke about what it's like being an engineer.